



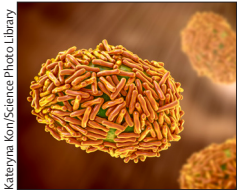
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Global monkeypox outbreak

The threat of zoonotic diseases is once again highlighted as the current outbreak of monkeypox continues in multiple countries where it is not usually endemic. Priya Venkatesan reports.



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For more **background information on monkeypox** see <https://www.who.int/news-room/fact-sheets/detail/monkeypox>

For **WHO global figures for monkeypox** see <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON390>

For **UK figures and updates for monkeypox** see <https://www.gov.uk/government/news/monkeypox-cases-confirmed-in-england-latest-updates>

For the **UK guidance for monkeypox control** see <https://www.gov.uk/government/publications/principles-for-monkeypox-control-in-the-uk-4-nations-consensus-statement/principles-for-monkeypox-control-in-the-uk-4-nations-consensus-statement>

For more on **Imvanex smallpox vaccine in the UK** see <https://twitter.com/ukhsa/status/1529748186927185922>

Caused by the DNA monkeypox virus belonging to the orthopoxvirus genus and transmitted between animals and humans and from human to human, monkeypox disease results in symptoms similar to those caused in the past by the now-eradicated smallpox orthopoxvirus but is less clinically severe, usually only causing serious illness in young children and immunosuppressed individuals. Monkeypox is primarily endemic to remote regions of west and central African countries, such as DR Congo and Nigeria, but since the beginning of May, 2022, hundreds of cases of monkeypox have been identified in multiple non-endemic countries, drawing international attention to the disease. Globally, between May 13 and June 2, 2022, 780 laboratory-confirmed cases of monkeypox were reported to WHO by 27 countries that are non-endemic for monkeypox virus. Sir Alimuddin (Ali) Zumla (Infectious Diseases and International Health, University College London, London, UK) commented: "This is the largest outbreak outside Africa ever".

Currently, the UK has the greatest number of cases—302 cases were confirmed between May 7 and June 5, 2022. Andrew Lee (National Incident Director for Monkeypox, UK Health Security Agency, London, UK), said: "This is a rare and unusual situation. [We are] rapidly investigating these infections because the evidence suggests that there may be transmission of the monkeypox virus in the community, spread by close contact". Monkeypox does not usually spread easily between people and can only spread through direct contact with respiratory secretions or skin lesions of an infected person or through contact with recently contaminated objects

such as clothing or linens. According to Lee, this is the first time community transmission of monkeypox has been identified in the UK. It is also the first time the virus has passed between people with no identified travel links to an endemic country.

Zumla is unsurprised by the recent emergence of monkeypox in countries around the world, describing how scientists in Africa have witnessed a gradual rise in monkeypox cases for decades, with more than 2000 suspected cases reported in 2018 in DR Congo alone. "As humans continued to move into animal habitats and cross-protection offered from decades-old smallpox immunisation campaigns began to wane, the optimal conditions for an outbreak were in place. However, the current global outbreak is an unprecedented and worrying development since the reasons for [it] remain unclear despite nearly a month of intense public health scrutiny and epidemiological investigations".

There are several unusual features about this outbreak. So far, a high number of the cases in the UK and other non-endemic countries are in men who are gay, bisexual, and have sex with men. Additionally, many of the cases in this outbreak have not presented with the classical clinical symptoms of monkeypox, such as skin lesions and eruptions concentrated on the face and extremities; in cases in this outbreak, the lesions have been more commonly presenting in the genital and peri-anal regions. This presentation suggests that direct physical contact with lesions during sexual contact is a likely route of transmission. However, monkeypox does not seem to be a sexually transmitted infection as traditionally described. Rather, as David Heymann (London School of Hygiene & Tropical

Medicine, London, UK) commented, "It can be classified as an infection that's transmitted by close sexual contact".

The accelerated transmission is concerning. Heymann said: "We need to understand why transmission is amplifying. One reason could be through physical contact happening in a population [such as the gay community] where transmission is easy". Lee highlighted that the accelerated case reporting in non-endemic countries could also be due to more effective surveillance in those countries. Zumla said: "The sudden and unexpected appearance of monkeypox simultaneously in several non-endemic countries suggests that there might have been undetected transmission for quite a while, amplified by recent large social events and increased travel".

So far in this outbreak, there have been no deaths or large numbers of serious cases requiring hospital admission. Preliminary data from PCR assays indicate that the monkeypox virus strains detected belong to the milder west African clade, rather than the central African clade that has historically caused more severe disease.

Although monkeypox remains rare and the risk to the general public is low, health authorities are remaining on high alert. In the UK, for example, guidance has been issued to health-care professionals to control transmission; more than 20 000 doses of the smallpox vaccine Imvanex have been procured for close contacts of people with monkeypox; and from June 8, 2022, monkeypox will be a notifiable infectious disease, requiring by law doctors to notify their local council if they suspect that a patient has monkeypox. Complacency at this point is not an option.

Priya Venkatesan